

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. 2000-CE-66-AD; Amendment 39-13082; AD 2003-05-06]**

**RIN 2120-AA64**

### **Airworthiness Directives; Robert E. Rust Models DeHavilland DH.C1 Chipmunk 21, 22, and 22A Airplanes**

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule.

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**SUMMARY:** This amendment adopts a new airworthiness directive (AD) that applies to certain Robert E. Rust (R.E. Rust) Models DeHavilland DH.C1 Chipmunk 21, 22, and 22A airplanes. This AD requires you to check the airplane logbook to determine whether certain modifications have been incorporated on the airplane and incorporate the modifications that have not already been accomplished. This AD is the result of the manufacturer performing a design study on the structural integrity of certain parts and reports of service failure of other parts installed on the affected airplanes. The actions specified by this AD are intended to prevent reduced structural integrity in the primary structure of the airplane, which could result in failure of the rudder torque tube, elevator fasteners, and the vertical fin rear spar, or jamming or damage to the elevator. Such failures could lead to loss of control of the airplane.

**DATES:** This AD becomes effective on April 25, 2003.

The Director of the Federal Register approved the incorporation by reference of certain publications listed in the regulations as of April 25, 2003.

**ADDRESSES:** You may get the service information referenced in this AD from DeHavilland Support Limited, Duxford Airfield, Bldg. 213, Cambridgeshire, CB2 4QR, United Kingdom, telephone: +44 1223 830090, facsimile: +44 1223 830085, e-mail: [info@dhsupport.com](mailto:info@dhsupport.com). You may view this information at the Federal Aviation Administration (FAA), Central Region, Office of the Regional Counsel, Attention: Rules Docket No. 2000-CE-66-AD, 901 Locust, Room 506, Kansas City, Missouri 64106; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Cindy Lorenzen, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia; telephone: (770) 703-6078; facsimile: (770) 703-6097.

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

#### *What Events Have Caused This AD?*

The FAA has received reports that an unsafe condition may exist on certain R.E. Rust Models DeHavilland DH.C1 Chipmunk 21, 22, and 22A airplanes. Failure reports of the rudder torque tube and elevator control fasteners on in-service airplanes and design studies by the manufacturer on the structural integrity of the glider towing attachment bolt and the vertical fin rear spar prompted us to issue this AD.

We have determined that failure of the rudder torque tube, the elevator control fasteners, the vertical fin rear spar, and the glider towing attachment bolt is caused by fatigue cracking and overload. As a result of the design studies, the manufacturer developed specific modifications to strengthen the affected areas of the airplane.

#### *What Is the Potential Impact if FAA Took No Action?*

These conditions, if not corrected, could result in failure of the rudder torque tube, elevator fasteners, and the vertical fin rear spar, or jamming or damage to the elevator. Such failures could lead to loss of control of the airplane.

#### *Has FAA Taken Any Action to This Point?*

We issued a proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) to include an AD that would apply to R.E. Rust Models DeHavilland DH.C1 Chipmunk 21, 22, and 22A airplanes. This proposal was published in the Federal Register as a notice of proposed rulemaking (NPRM) on November 8, 2002 (67 FR 68052). The NPRM proposed to require you to check the airplane logbook to determine whether certain modifications have been incorporated on the airplane and incorporate the modifications that have not already been accomplished.

#### *Was the Public Invited to Comment?*

The FAA encouraged interested persons to participate in the making of this amendment. The following presents the comments received on the proposal and FAA's response to each comment:

### **Comment Issue No. 1: Change the Compliance Time for Incorporating Missing Modifications**

#### *What Is the Commenter's Concern?*

The commenter states that parts required for each modification may not be available from the manufacturer within 90 days after the effective date of this AD. Therefore, the commenter suggests allowing more time to acquire parts by changing the compliance time from 90 days to 12 months after the effective date of this AD.

### *What Is FAA's Response to the Concern?*

We do not concur. The commenter does not offer any solution to ensure the airworthiness of the airplanes until the parts become available. We cannot increase the compliance time unless other means to ensure the continued airworthiness of these airplanes are substantiated.

We will consider an alternative method of compliance if the alternative provides an equivalent level of safety as outlined in paragraph (e) of this AD.

We are not changing the final rule AD action based on this comment.

### **Comment Issue No. 2: Change the Estimated Number of Workhours Necessary to Incorporate Missing Modifications**

#### *What Is the Commenter's Concern?*

The commenter states that the number of workhours necessary to incorporate certain modifications is incorrect. The commenter states that Modification H 225 will take 20 workhours instead of 40 workhours; Modification H 269 will take 12 workhours instead of 4 workhours; and Modification H 275 contains a typographical error in the workhours, it should be 3 workhours instead of 43 workhours, the cost was calculated correctly using 3 workhours. The commenter suggests that we change the cost impact section to more accurately reflect the workhours necessary to incorporate the modification.

#### *What Is FAA's Response to the Concern?*

We concur with the commenter. The estimates given by the commenter are more accurate than the information we used.

We will change the final rule AD action to incorporate these changes.

### **FAA's Determination**

#### *What Is FAA's Final Determination on This Issue?*

After careful review of all available information related to the subject presented above, we have determined that air safety and the public interest require the adoption of the rule as proposed except for minor editorial corrections. We have determined that these minor corrections:

- Provide the intent that was proposed in the NPRM for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM.

### **Cost Impact**

#### *How Many Airplanes Does This AD Impact?*

We estimate that this AD affects 54 airplanes in the U.S. registry.

#### *What Is the Cost Impact of This AD on Owners/Operators of the Affected Airplanes?*

We estimate the following costs to accomplish any necessary modifications that will be required based on the results of the logbook check. We have no way of determining the number of airplanes that may need such modification.

<b>Modification</b>	<b>Labor cost</b>	<b>Parts cost</b>	<b>Total cost per airplane</b>
H225	20 workhours x \$60=\$1,200	\$1,470	\$1,200 + \$1,470=\$2,670.
H 269	12 workhours x \$60=\$720	\$203 each (2 per airplane)	\$720 + \$406 (\$203 x 2)=\$1,126.
H 275	3 workhours x \$60=\$180	\$203 each (2 per airplane)	\$180 + \$406 (\$203 x 2)=\$586.
H 360	20 workhours x \$60=\$1,200	\$1,150	\$1,200 + \$1,150=\$2,350.

### **Compliance Time of This AD**

#### *What Is the Compliance Time of This AD?*

The compliance time of this AD is "within the next 90 days after the effective date of this AD."

#### *Why Is the Compliance Time Presented in Calendar Time Instead of Hours Time-in-Service (TIS)?*

Failure of the rudder torque tube, the elevator control fasteners, the vertical fin rear spar, and the glider towing attachment bolt is only unsafe during airplane operation. However, this unsafe condition is not a result of the number of times the airplane is operated. The chance of this situation occurring is the same for an airplane with 50 hours time-in-service (TIS) as it would be for an airplane with 1,000 hours TIS.

For this reason, the FAA has determined that a compliance based on calendar time will be utilized in this AD in order to assure that the unsafe condition is addressed on all airplanes in a reasonable time period.

### **Regulatory Impact**

#### *Does This AD Impact Various Entities?*

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

#### *Does This AD Involve a Significant Rule or Regulatory Action?*

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A copy of the final evaluation prepared for this action is contained in the Rules Docket. A copy of it may be obtained by contacting the Rules Docket at the location provided under the caption ADDRESSES.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39—AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. FAA amends § 39.13 by adding a new AD to read as follows:

# AIRWORTHINESS DIRECTIVE

Aircraft Certification Service  
Washington, DC



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "www.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2003-05-06 Robert E. Rust:** Amendment 39-13082; Docket No. 2000-CE-66-AD.

(a) *What airplanes are affected by this AD?* This AD affects R.E. Rust Models DeHavilland DH.C1 Chipmunk 21, 22, and 22A airplanes, serial numbers C1-001 through C1-1014, that are type certificated in any category.

**Note 1:** We recommend all owners/operators of DeHavilland DH.C1 Chipmunk 21, 22, and 22A airplanes, serial numbers C1-001 through C1-1014, with experimental airworthiness certificates comply with the actions required in this AD.

(b) *Who must comply with this AD?* Anyone who wishes to operate any of the airplanes identified in paragraph (a) of this AD must comply with this AD.

(c) *What problem does this AD address?* The actions specified by this AD are intended to prevent reduced structural integrity in the primary structure of the airplane, which could result in failure of the rudder torque tube, elevator fasteners, and the vertical fin rear spar, or jamming or damage to the elevator. Such failures could lead to loss of control of the airplane.

(d) *What actions must I accomplish to address this problem?* To address this problem, you must accomplish the following:

Actions	Compliance	Procedures
(1) Check the airplane logbook: (i) For all affected airplanes: to determine if Modifications H225, H269, and H360 are incorporated; and (ii) For only these airplanes that incorporate Modification H197 (glider towing capabilities): to determine if Modification H275 is incorporated.	Within the next 90 days after April 25, 2003 (the effective date of this AD).	The owner/operator holding at least a private pilot certificate as authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7) may check the airplane logbook.
(2) If, by checking the airplane logbook, you can positively determine that all the applicable modifications in paragraphs (d)(1)(i) and (d)(1)(ii) are incorporated, you must make an entry into the aircraft records that shows compliance with paragraphs (d)(1) and (d)(2) of this AD in accordance with section 43.9 of the Federal Aviation Regulations (14 CFR 43.9).	Not applicable.	the owner/operator holding at least a private pilot certificate is authorized by section 43.7 of the Federal Aviation Regulations (14 CFR 43.7) may check the airplane logbook.

<p>(3) If, by checking the airplane logbook, you determine that all the applicable modifications in paragraphs (d)(1)(i) and (d)(1)(ii) are not incorporated, or you cannot positively show that they are incorporated:</p> <p>(i) Incorporate each missing modification; and</p> <p>(ii) you must make an entry into the aircraft records that shows compliance with this portion of the AD in accordance with section 43.9 of the Federal Aviation Regulations (14 CFR 43.9).</p>	<p>Within the next 90 days after April 25, 2003 (the effective date of this AD), unless already accomplished.</p>	<p>British Aerospace Aerostructures Limited has issued BAe Aircraft Technical News Sheet CT (C1) No. 200, Issue 1, dated March 1, 1997.</p>
<p>(4) Do not incorporate Modification H197 unless Modification H275 has also been incorporated.</p>	<p>As of April 25, 2003 the (effective date of this AD).</p>	<p>British Aerospace Aerostructures Limited has issued BAe Aircraft Technical News Sheet CT (C1) No. 200, Issue 1, dated March 1, 1997.</p>

**Note 2:** Although not required by this AD, FAA highly recommends you incorporate Modification H 282.

(e) *Can I comply with this AD in any other way?* You may use an alternative method of compliance or adjust the compliance time if:

- (1) Your alternative method of compliance provides an equivalent level of safety; and
- (2) The Manager, Atlanta Aircraft Certification Office (ACO), approves your alternative. Submit your request through an FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

**Note 3:** This AD applies to each airplane identified in paragraph (a) of this AD, regardless of whether it has been modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (e) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if you have not eliminated the unsafe condition, specific actions you propose to address it.

(f) *Where can I get information about any already-approved alternative methods of compliance?* Contact Cindy Lorenzen, Aerospace Engineer, FAA, Atlanta Aircraft Certification Office, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia; telephone: (770) 703-6078; facsimile: (770) 703-6097.

(g) *What if I need to fly the airplane to another location to comply with this AD?* The FAA can issue a special flight permit under sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate your airplane to a location where you can accomplish the requirements of this AD.

(h) *Are any service bulletins incorporated into this AD by reference?* Actions required by this AD must be done in accordance with BAe Aircraft Technical News Sheet CT (C1) No 200, Issue 1, dated March 1, 1997. The Director of the Federal Register approved this incorporation by reference under 5 U.S.C. 552(a) and 1 CFR part 51. You may get copies from DeHavilland Support Limited,

Duxford Airfield, Bldg. 213, Cambridgeshire, CB2 4QR, United Kingdom, telephone: +44 1223 830090, facsimile: +44 1223 830085, e-mail: [info@dhsupport.com](mailto:info@dhsupport.com). You may view copies at the FAA, Central Region, Office of the Regional Counsel, 901 Locust, Room 506, Kansas City, Missouri, or at the Office of the Federal Register, 800 North Capitol Street, NW, suite 700, Washington, DC.

(i) *When does this amendment become effective?* This amendment becomes effective on April 25, 2003.

Issued in Kansas City, Missouri, on March 4, 2003.

Dorenda D. Baker,

Acting Manager, Small Airplane Directorate, Aircraft Certification Service.

[FR Doc. 03-6040 Filed 3-17-03; 8:45 am]

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